



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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MM41/0323

EXAMINER

DAY, M

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 03/23/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/962,362

Applicant(s)

N. Kambe et al.

Examiner

M. Day

Group Art Unit

2875

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-19 is/are pending in the application.
- Of the above claim(s) 7-19 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-6 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3
- ☒ Notice of Reference(s) Cited, PTO-892
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, drawn to display devices, classified in class 313, subclass 495;
 - II. Claims 7-12, drawn phosphor compositions, classified in class 252, subclass 301.6R;
 - III. Claims 13-19, drawn to method for making zinc oxide particles, classified in class 427, subclass 64.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group II are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does not require a curable polymer of the subcombination. The subcombination has separate utility such as in a fluorescent lamp.

Inventions of Group I and Group III are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as

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claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process. For example, the product as claimed can be made by homogeneous precipitation at equilibrium in solution with reaction volume limited by micelles in solution in a volume limiting matrix.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter as shown by their different classification, restriction for examination purposes as indicated is proper. Furthermore, it is noted that the search required for Group I is not required for Groups II, and III, and thus represents an undue burden on the Examiner.

4. During a telephone conversation with Dr. P. Dardi on March 18, 1999 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-6. Affirmation of this election must be made by applicant in responding to this Office action. Claims 7-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently

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named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(h).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bhargava. Referring to claim 1, Bhargava discloses a display (see FIG. 11-13) comprising phosphor particles (phosphor layer 49) having an average diameter less than 100 nm (see abstract, 10 nm particles) wherein the particle size is selected to yield light in a desirable portion of the spectrum (see col. 5, lines 50-63, 3 nm yellow and 6 nm green).

Referring to claim 2, see col. 5, lines 50-63, ZnS.

Claims 4 and 6 are rejected for the same reason as claim 1.

8. Claims 1, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Jaskie. Referring to claim 1, Jaskie discloses a display (see FIG. 5) comprising phosphor particles

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(fluorescent layer 53) having an average diameter less than 100 nm (see abstract, 10 nm particles) wherein the particle size is selected to yield light in a desirable portion of the spectrum.

Claim 6 is rejected for the same reason as claim 1.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhargava as applied to claim 1 above. Referring to claim 3, Bhargava is silent as to ZnO host phosphor. Bhargava suggest group II-IV host phosphors of which ZnO is notoriously well known. The selection of known materials for a known purpose is generally considered to be within the skill of the art. It would have been obvious to select ZnO as the host phosphor, as suggested by

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Bhargava, because the selection of known materials for a known purpose is within the skill of the art.

Referring to claim 5, the specification of a desired particle range is generally recognized to be within the skill of the art. See for example Jaskie, col. 7, lines 34-40. It would have been obvious to specify a desired particle range because the specification of a desired particle range is within the skill of the art.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jaskie as applied to claim 1 above. Referring to claim 5, Jaskie teaches that the specification of a desired particle range is within the skill of the art. See col. 7, lines 34-40. It would have been obvious to specify a desired particle range because the specification of a desired particle range is generally recognized to be within the skill of the art.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Day whose telephone number is 703/305-4941. The examiner can normally be reached on Monday-Friday, from 8:00 A.M. to 5:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea, can be reached by phoning 703/305-4939. The Fax phone number is 703/308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703/305-4900.

March 18, 1999



**MICHAEL DAY
PATENT EXAMINER
GROUP 2800**